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Note

# Discovery of the previously unknown female of *Salanoemia shigerui* Maruyama (Lepidoptera: Hesperiidae) from Peninsular Malaysia

The genus *Salanoemia* was erected by Eliot (in Corbet & Pendlebury, 1978) for a group of skipper butterflies formerly placed under *Plastingia* Butler, 1870. It is distributed from India to Sundaland (Corbet & Pendlebury, 1992). Two new species have been added to the genus in the last decade (Maruyama, 2000; de Jong, 2006), among them *Salanoemia shigerui*, which was described from a single male from Peninsular Malaysia (Maruyama, 2000) and is also known from a single male from east Sumatra (de Jong, 2006), but for which the female has remained unknown. The male of this species (Figs. 1 A & B) can be readily distinguished from males of other species of *Salanoemia* by the creamy-white colour on the basal two thirds of the hindwing underside, as well as the creamy-white discal patch on the hindwing upperside. On both sides of the forewing, there is also a similarly coloured streak along the basal half of the dorsum, and yellowish scaling along the basal half of the costa.

Females of this species were found during a butterfly survey in Panti Forest Reserve (located near the town of Kota Tinggi in the state of Johore, Malaysia) by two of the authors (C.-K. Phon and L.G. Kirton) in July 2010. Two males and three females were collected together. The males are very similar to the male described by Maruyama (2000) but are slightly smaller in size (forewing length 17.2 mm compared with 19.3 mm). The female (Figs. 1 C & D) differs from the male in a number of respects. The specimens are larger (forewing length 19.4–20.6 mm), and the areas that are creamy-yellow in the male are, in the female, orange-yellow on the upperside and yellow on the underside. On the underside of both wings, the yellow markings are overlaid with orange scaling that is more prominent in spaces 1, 1b and 8 of the hindwing. The veins crossing the discal patch on the hindwing upperside are not dark dusted. The tornal cilia of the hindwing are longer and more orange. The brown band along the margin of the hindwing underside is not as dark as in the male and is more ferruginous in colour. In addition, the female has a more yellowish brown scale and hair colour on the thorax and abdomen; in the male, these hairs are a lighter shade of yellow- or grey-brown.

Although the colour of the markings in the male has been described as creamy-white (Maruyama, 2000), the hindwing upperside discal patch is actually creamy-yellow in space 4 and below vein 2, while the creamy-white area on the hindwing underside is overlaid with yellowish scales, particularly in spaces 1, 1b and 8. Consequently, the colour in the male is somewhat yellowish, as implied in de Jong (2006), which is more obvious in fresh than in worn specimens. However, the yellow to orange colouration is stronger in the female.

A key to the males of the known species of *Salanoemia* is given in de Jong (2006). *Salanoemia shigerui* is also included in an updated key to both sexes of the Malayan species (Eliot, 2006) that is based on the key in Corbet and Pendlebury (1992). However, the key is no longer applicable because the female of *S. shigerui* has yellow markings. The key is, therefore, revised as shown overleaf.

As far as is known, *Salanoemia shigerui* was in the past only known from a specimen from east Sumatra and the holotype collected from Jason Bay, Malaysia (Fig. 2). The specimens collected from Panti Forest Reserve in 2010 are, like the holotype, also from the south eastern extreme of Peninsular Malaysia (south east Johore; Fig. 2), an area that together with east Sumatra and west Borneo belongs to a biogeographical subregion called the Riau pocket (Corner, 1978; Fig. 2). This area is thought to comprise remnants of low-lying forests and swamps that existed during glacial periods when sea levels were lower. However, two years prior to its discovery in Panti Forest Reserve, a female *S. shigerui* was photographed in the wild (Fig. 3) by one of the authors (L.-C. Goh) in Shah Alam, Selangor, which is in the central west of the

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**Key for the separation of the Malayan species of *Salanoemia***

1. Upperside hindwing unmarked brown ..... 2
- Upperside hindwing with a yellowish to cream coloured discal area ..... 3
2. Upperside forewing without subapical spots ..... *S. sala*
- Upperside forewing with one or two subapical spots ..... *S. fuscicornis*
3. Upperside forewing cell spots subequal ..... 4
- Upperside forewing upper cell spot absent or very small ..... *S. similis*
4. Underside hindwing without a prominent, brown marginal band; upperside hindwing discal area and underside hindwing ground colour yellow ..... *S. tavoyana*
- Underside hindwing with a wide, brown marginal band from tornus to termen; hindwing with discal area of upperside and basal two thirds of underside cream coloured in ♂, yellow in ♀ ..... *S. shigerui*

Peninsula (Fig. 2). As this site is an agricultural park, it is uncertain whether the species was resident in the secondary forest of this area or was introduced on rattans or ornamental palms during the development of the park.

In Panti Forest Reserve, *Salanoemia shigerui* was observed to fly faster and in more open vegetation, such as clearings, compared with *S. sala* (Hewitson, [1866]) and *S. fuscicornis* (Elwes & Edwards, 1897), which were both present at the same location, but nearby in more shaded forest. In Selangor, *S. shigerui* was encountered under shade in secondary forest. *Salanoemia shigerui* appeared to be sporadic in occurrence at Panti Forest Reserve, as it was not found on subsequent visits. *Salanoemia sala* was the commonest and most regularly encountered species of the genus.

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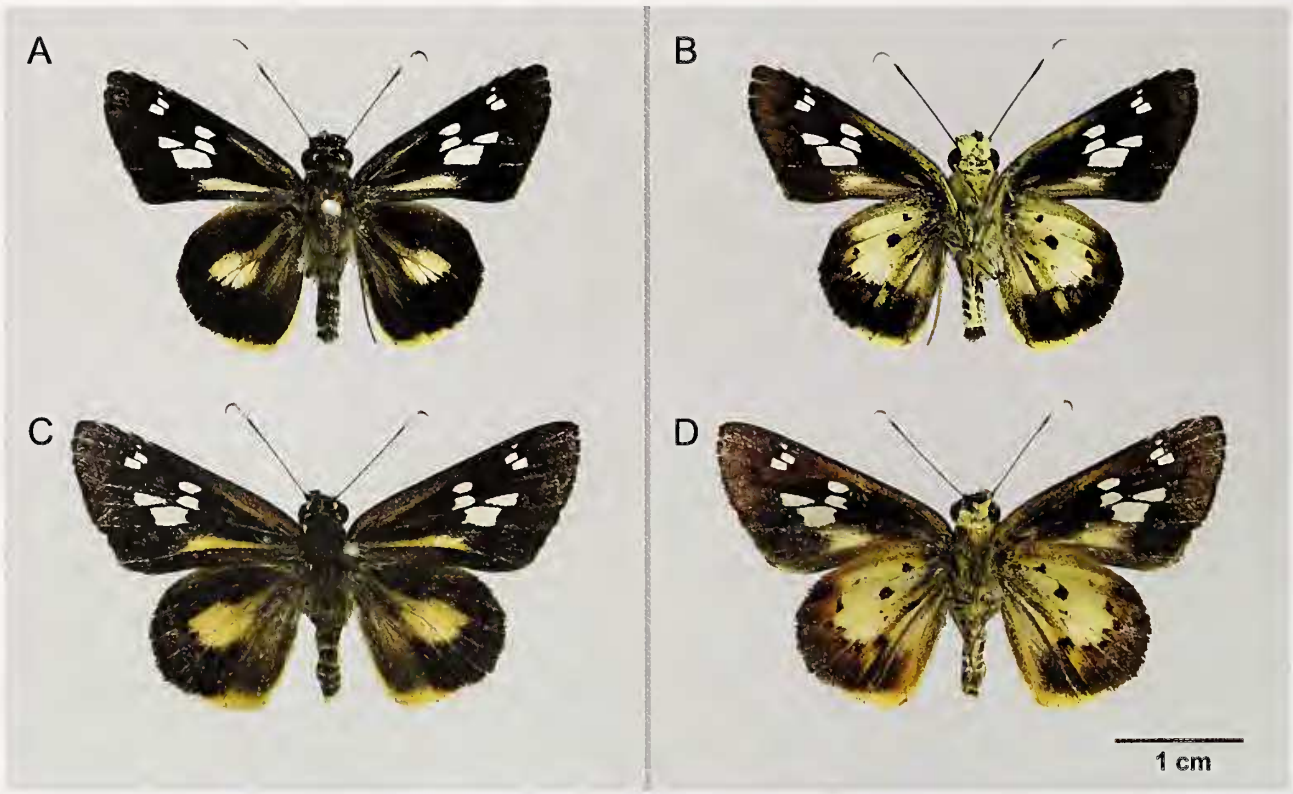


**Figure 1**. *Salanoemia shigerui* collected from Panti Forest Reserve, Johore, Malaysia, in the collection of the Forest Research Institute Malaysia. A) Male, upperside. B) Male, underside. C) Female, upperside. D) Female, underside.

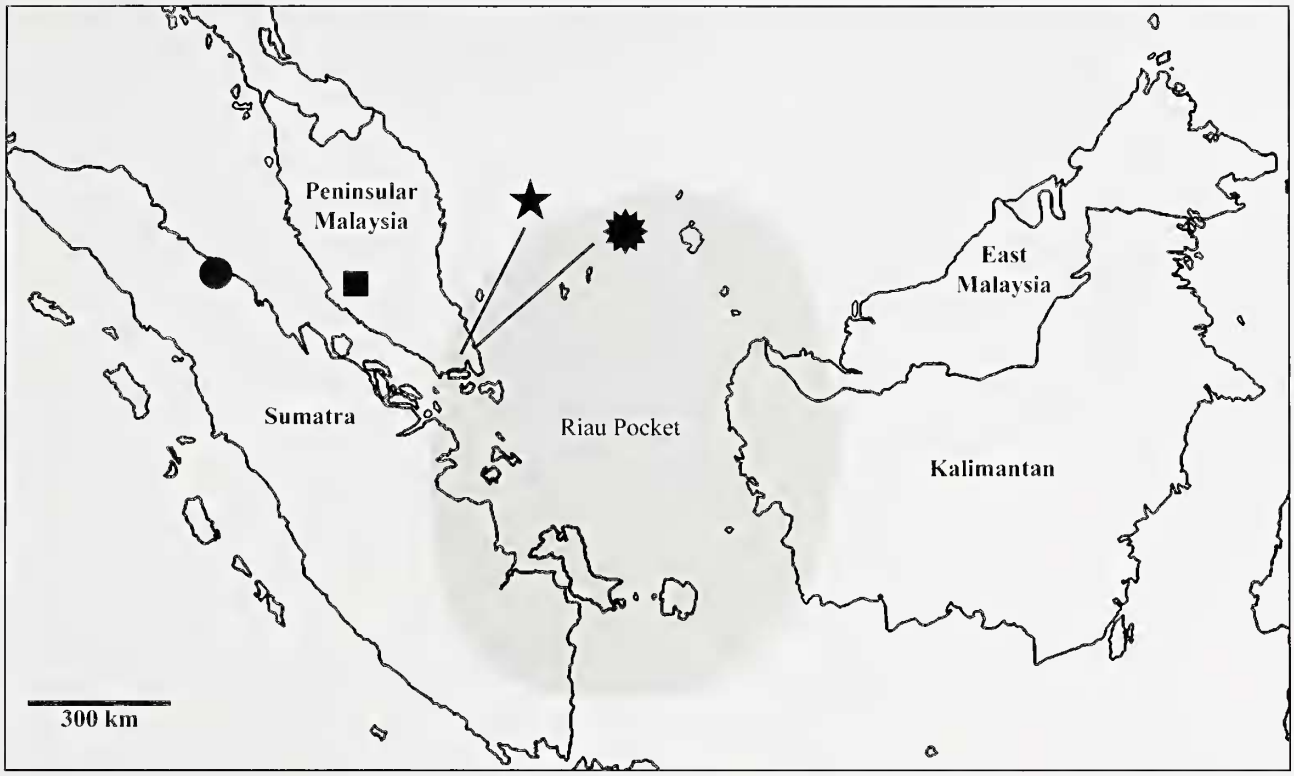


**Figure 2.** Known occurrences of *Salanoemia shigerui*. Peninsular Malaysia: ✹ Jason Bay, Johore (type locality); ■ Shah Alam, Selangor; ★ Panti Forest Reserve, Johore. Sumatra: ● Laut Tador. The shaded region is the Riau Pocket.

**Figure 3.** *Salanoemia shigerui* female photographed at Bukit Cahaya Seri Alam Agricultural Park, Shah Alam, Selangor, Malaysia. Photo: L.-C. Goh.

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